## DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-000752

Address: 333 Burma Road **Date Inspected:** 02-Nov-2007

City: Oakland, CA 94607

**Project Name:** SAS Superstructure **OSM Arrival Time:** 600 **OSM Departure Time:** 1530 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Zhu Zhong hai No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A **Qualified Welders:** Yes No N/A **Verified Joint Fit-up:** Yes No N/A N/A N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No Yes N/A **Delayed / Cancelled:** No

34-0006 **Bridge No: Component:** Skin Plate

## **Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Tim McClendon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

Description WBS Dwg No. Status 1 89M skin plate E in progress

Caltrans QA Inspector observed the Magnetic Particle (MT) Inspection on skin plate E splice weld of the upper and lower portion of the skin plate. ZPMC Cai Xin xin performed the inspection of the final weld pass on piece numbers: musc to MA108, weld numbers W5 and W6. MT was performed with an Alternating Current (AC) yoke; model B310S and a serial number 4984. What appeared to be a 10 lbs test block was used to verify lifting strength and a Pie gage was used to verify field direction. Dry Powder method was used to perform the inspection, using gray contrasting power. It appeared MT Inspection was being performed correctly and no indications were found

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2 **OBG** RS9

Caltrans QA Inspector observed drilling of holes in WT Stiffeners for OBG random dimensions were observed being taken by ZPMC QC and appears to meet dimensional requirements of drawing RS9. Caltrans QA Inspector observed these same T-Beams being tacked welded to Bottom plate using the FCAW process. Random visual and dimensional observations were performed and WT Stiffeners appear to meet requirements of drawings. However there are areas of discontinuities approximately, 40mm in length, observed by QA inspector where T-Beams were hand flame cut in order to split W21 see photo. Maximum depth of discontinuity did not exceed 6mm. ZPMC CWI Xu Xian ping stated areas of discontinuities over 3mm in depth will be removed as per D1.5 Table 3.1 page 51.





## **Summary of Conversations:**

Within body of report.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

**Inspected By:** McClendon, Timothy Quality Assurance Inspector

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**Reviewed By:** Cuellar,Robert QA Reviewer